Applying SUI Across Sectors

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The SUI framework is sector-agnostic. Any enterprise whose product or service produces a measurable, attributable environmental or social outcome can define a SUI. This page provides a generalisation guide across the major cleantech and impact sectors relevant to the CleantechHUB portfolio.

Sector-by-Sector SUI Templates

Agriculture and Food Systems

Sub-sector	Application Event	SUI Name	Unit	Key Baseline Challenge
Bio-inputs / Biostimulants	1 kg product applied per hectare	Chemical Displacement per Hectare	kg CO?e / ha	Regional synthetic input averages vary widely; disaggregate by crop and region
Precision irrigation	1 irrigation event per hectare	Water Saved per Irrigation Event	m³ water / ha	Counterfactual irrigation volume from regional water authority statistics
Food waste reduction	1 kg food waste diverted from landfill	Landfill Diversion per kg	kg CO?e / kg food	National landfill emission factors from EPA/environment ministry
Regenerative agriculture platform	1 hectare enrolled and verified per season	Soil Carbon per Hectare	tCO?e / ha / year	Requires soil sampling; LCA scope 3 often controversial — document boundary carefully

Energy and Mobility

Sub-sector	Application Event	SUI Name	Unit	Key Baseline Challenge
EV Charging	1 kWh delivered through managed charger	kWh Delivered per Session	kg CO?e avoided / kWh	Grid emission factor must be updated as grid decarbonises — a diminishing SUI over time

Sub-sector	Application Event	SUI Name	Unit	Key Baseline Challenge
Distributed solar (C&I)	1 kWh generated by installed system	Clean kWh Generated per Month	kg CO?e / kWh	Grid displacement assumes system substitutes grid power, not additional consumption
Electric two-wheelers (fleet)	1 km driven by fleet vehicle	Clean km per Vehicle	kg CO?e / km	Fleet average ICE equivalent; leakage if displaced drivers switch to ICE alternatives
Energy efficiency (buildings)	1 month of occupancy in certified efficient building	Energy Intensity Reduction per m²	kWh / m² / month	Baseline energy intensity from building energy audit; weather-normalisation required

Water and Sanitation

Sub-sector	Application Event	SUI Name	Unit	Key Baseline Challenge
Water purification (household)	1 litre purified and delivered	Safe Water per Litre	DALY avoided / 1000 litres	WHO DALY factors for waterborne disease; counterfactual water source quality data
Industrial water recycling	1 m³ water recycled vs. discharged	Water Recycled per m³	m³ freshwater saved	Industrial water withdrawal baseline from watershed authority
Wastewater treatment	1 m³ wastewater treated to standard	Pollution Load Removed per m³	kg BOD removed / m³	Effluent quality standard (discharge permit defines counterfactual)

Circular Economy and Waste

Sub-sector	Application Event	SUI Name	Unit	Key Baseline Challenge
Plastic recycling	1 kg plastic collected and processed	Plastic Diverted per kg	kg CO?e / kg plastic	Emission factor depends on plastic type and alternative disposal method
Electronics refurbishment	1 device refurbished and resold	Device Life Extension	kg CO?e / device	Avoided manufacturing emissions require LCA of new device equivalent
Industrial symbiosis platform	1 kg waste matched between producer and consumer	Waste-to-Resource Match per kg	kg CO?e / kg material	Complex: must account for transport emissions of rerouted material

Biodiversity and Land Use

Sub-sector	Application Event	SUI Name	Unit	Key Baseline Challenge

Forest conservation (REDD+)	1 ha protected for 1 year	Deforestation Avoided per Hectare	tCO?e / ha / year	FREL (Forest Reference Emission Level) required; jurisdictional baseline complex
Ecosystem restoration	1 ha restored to target condition	Biodiversity Units Restored per Hectare	BNG units / ha (UK metric) or equivalent	Baseline habitat condition assessment; TNFD metrics preferred
Sustainable aquaculture	1 tonne of certified product harvested	Wild Fish Substitution per Tonne	tonne wild harvest avoided / tonne farmed	Feed conversion ratio and wild fish equivalent calculation required

Five Cross-Sector Principles

1. **Outcome over output:** Always define the SUI at the outcome level (CO?e avoided, m³ water saved, DALY avoided) not the output level (units sold, installations completed). Investors and MDBs will push to the outcome level in due diligence — define it proactively.
2. **Net not gross:** The SUI is always net of counterfactual. A solar installation that adds capacity to an already-decarbonising grid has a smaller net SUI than an equivalent installation displacing coal. Acknowledge this honestly — it demonstrates credibility.
3. **Scope boundaries must be stated:** Scope 1 (direct), Scope 2 (energy), Scope 3 (value chain) boundaries must be explicit. For most cleantech products, the most impactful emissions are Scope 3 avoided — but these are also the hardest to verify. Be precise about which scopes your SUI covers.
4. **Diminishing SUIs are acceptable:** A grid-connected clean energy SUI will naturally decline as the grid decarbonises. Document this explicitly and include a projection of how the SUI evolves under different grid decarbonisation scenarios. This demonstrates sophistication rather than hiding a risk.
5. **Negative SUIs must be disclosed:** If your product produces some environmental harm alongside its primary benefit (e.g., mining impacts for battery metals, land use change for bioenergy crops), these must be disclosed and ideally included in a net SUI calculation. DNSH (Do No Significant Harm) compliance requires this — don't wait for an auditor to find it.

SUI Readiness Checklist by Sector

Before claiming a SUI in any sector, confirm:

- [ ] Outcome domain mapped to IRIS+, TNFD, or GRI indicator
- [ ] Application event defined (trigger condition, unit boundary)
- [ ] Counterfactual baseline identified with peer-reviewed or official source
- [ ] Measurement protocol exists for the outcome variable at the point of application
- [ ] Scope boundaries explicitly documented (Scope 1/2/3)
- [ ] Uncertainty range estimated (even if rough at first)
- [ ] Independent verifier identified (even if not yet engaged)
- [ ] SSOT architecture planned (even if not yet built)

Continue to Chapter 6: The CTH VRF Integration — how SUI fits into the Venture Readiness Framework.

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